applying a potential to said electrode sufficient to generate electrochemical reagents capable of deprotecting at least one of the protected chemical functional groups of said molecule, and

bonding the deprotected chemical functional group with a monomer or a pre-formed molecule.

In claims 3, 4 and 5 first line, please delete "2" and insert --1--.

Kindly cancel claim 10.

16. (Twice Amended) A method for electrochemical synthesis of an array of separately formed polymers on a porous substrate, which comprises the steps of:

placing a buffering [or scavenging] solution in contact with an array of electrodes that is proximate to a substrate surface, said surface being proximate to one of more molecules bearing at least one protected chemical functional group attached thereto, wherein a buffering solution is one having the capacity to prevent pH changes upon addition of small amounts of acids or bases;

selectively deprotecting at least one protected chemical functional group on at least one of said molecules;

bonding a first monomer having at least one protected chemical functional group to one or more deprotected chemical functional groups of said molecule;

selectively deprotecting a chemical functional group on the bonded molecule or another of said molecules bearing at least one protected chemical functional group;

bonding a second monomer having at least one protected chemical functional group to a deprotected chemical functional group of the bonded molecule or said other deprotected molecule; and

repeating the selective deprotection of a chemical functional group on a bonded protected monomer or a bonded protected molecule and the subsequent bonding of an additional monomer to said deprotected chemical functional group until at least two separate polymers of desired length are formed on the substrate surface.

In claims 18 and 43, lines 1-2, please delete "or scavenging".

Kindly cancel claim 25.

41. (Twice Amended) A method for electrochemical synthesis of an array of separately formed oligonucleotides on a porous substrate, which comprises the steps of:

placing a buffering [or scavenging] solution in contact with an array of electrodes that is proximate to a substrate surface, said surface being proximate to one of more molecules bearing at least one protected chemical functional group attached thereto, wherein a buffering solution is one having the capacity to prevent pH changes upon addition of small amounts of acids or bases;

selectively deprotecting at least one protected chemical functional group on at least one of said molecules;